

REMARKS

The application has been reviewed in light of the office action mailed on April 8, 2005. Reconsideration is requested in light of the following remarks.

The title is objected to as being non-descriptive. As requested by the Office Action, Applicants have amended the Title, which is now clearly indicative of the claimed invention.

Claim 35 stands objected to due to an informality. Claim 35 has been amended as requested by the Office Action to overcome the objection.

Claims 30 and 32 stand rejected under 35 U.S.C. 102(b) as being anticipated by Adams et al., U.S. Patent No. 5,707,052 (“Adams”). Reconsideration is respectfully requested for the following reasons.

Claim 30 recites a method for positioning a printed circuit board support comprising “providing at least a pair of parallel outer rails and a mid-element between said pair of outer rails, and at least one component for biasing each one of said outer rails outwardly from said mid-element.” For example, the specification discloses, with reference to Figure 1, that the “coiled compression springs 34, 35 function to bias each one of the outer rails 12, 14 ... outwardly from the mid block 16.” Specification, page 7, lines 4-6. The claimed invention is not limited to the disclosed embodiments.

Adams does not teach or suggest anything that can be compared to the claimed “component for biasing.” The Office Action asserts that Adams teaches “outer rails (15, 16) and a mid-element (28) between the pair of outer rails, and at least one component (20) for biasing each one of the out rails outwardly from the mid element.” Office Action, page 3. The Office Action’s characterization of Adams is contrary to the structure and function disclosed in Adams. Element 20 of Adams, which the Office Action compares to a “component for biasing,” is actually an air hose attached to conveyor rails 15 and 16.

Col. 3, ll. 9-14. When a circuit board is located between Adams' conveyor rails 15 and 16, the air hose 20 can be pressurized to expand and thereby hold the circuit board in place. Significantly, the air hose 20 has no affect on the movement of the conveyor rails 15 and 16.

Adams describes the function of its helix-shaped air hose 20 as follows:

Ones the circuit board comes to a stop ... , the air hoses are then pressurized This pressurization causes the helix to stiffen and the diameter of the helix increases somewhat. This action causes the air hoses ... to become wedged between the bottom of the [circuit board] and the top of the assembly station Since the pressurized hoses are now rigid, they provide support to the underside of the printed circuit board.

Col. 3, lines 46-59. Thus, the air hose 20 of Adams is not a “component for biasing each one of said outer rails outwardly from said mid-element.” To the contrary, Adams' air hose 20 has no affect on movement of its conveyor rails 15 and 16. Claim 30 is clearly allowable over Adams for at least this reason.

Further, claim 30 recites the “outer rails being movable toward each other by a compression force applied against said outer rails to fit said outer rails between surfaces on a positioning device.” In this regard, the specification discloses, for example, that the “outer rails 12, 14 are movable toward each other against the bias of the coiled compression springs 34, 34'; 35, 35' to position the support 10 between spaced surfaces of the positioning device.” Specification, page 7, lines 6-9.

Adams teaches nothing that relates to this limitation. The Office Action simply asserts, without explanation, that in Adams “the outer rails [are] movable toward each other by a compression force applied against the outer rails to fit the outer rails between surfaces on a position device (18).” Office Action, page 3. To the contrary, Adams' element 18 is a “work surface ... that lies below the conveyor rails” 15 and 16. Conveyor rail 15 is fixed on the top of the work surface 18, and conveyor rail 16 is movable by an electric motor on top of the work surface 18. Col. 2, l. 66 – col. 3, l. 6. Thus, these

elements cannot function as asserted by the Office Action – i.e., conveyor rails 15 and 16 are not “movable toward each other by a compression force applied against the outer rails,” and the conveyor rails 15 and 16 do not fit “between surfaces on a position device.” For these additional reasons, claim 30 clearly distinguishes over Adams.

Moreover, claim 30 recites the step of “placing said outer rails in abutting engagement with said surfaces on said positioning device by releasing said outer rails when said outer rails are between said surfaces.” For example, the specification discloses that “upon release[,] the support expands to provide contact between the outer surfaces ... on the outer rails 12, 14 with the spaced surfaces of the positioning device 97.” Specification, page 7, lines 10-13.

Nothing in Adams relates to the claimed limitation. The Office Action asserts that Adams teaches “placing the outer rails in abutting engagement with the surfaces on the positioning device be [sic] releasing the outer rails when the outer rails are between the surfaces as shown in Fig. 1 (see also, col. 2, line 57 to col. 4, line 48).” Office Action, page 3. Other than quoting the claim limitation, the Office Action does not cite any specific element in Adams, nor does the Office Action explain how Adams could possibly meet the claim limitation. The cited portion of Adams’ disclosure does not provide any support for the Office Action’s assertion. Adams does not discuss or contemplate the step of “placing said outer rails in abutting engagement with said surfaces on said positioning device by releasing said outer rails when said outer rails are between said surfaces.”

For this additional reason, claim 30 is allowable over Adams. Claim 32 depends from claim 30 and should be allowed at least for the same reasons as for allowance of claim 30, and for other reasons. For example, claim 32 recites that “providing at least one component for biasing comprises providing at least one spring.” Adams does not teach or suggest this limitation, and this is an additional reason for allowance of claim 32.

Claims 30, 32 and 35 stand rejected under 35 U.S.C. 102(b) as being anticipated by Albert, Jr., U.S. Patent No. 3,930,644 (“Albert”). Reconsideration is respectfully requested for the following reasons.

As discussed above, claim 30 recites “providing ... at least one component for biasing each one of said outer rails outwardly from said mid-element.” The Office Action asserts that Albert teaches a “component for biasing (24) each one of the out[er] rails [7, 8] outwardly from the middle-element [15].” Office Action, page 4. A cursory look at Albert’s structure reveals that it cannot function as asserted by the Office Action. Spring 24 urges element 8 toward element 15 – not “outwardly from” as claimed. And, there is no “component for biasing” in Adams that urges element 7 in any direction – spring 24 does not contact or exert any force onto element 7. Thus, Adams fails to teach or suggest “providing ... at least one component for biasing each one of said outer rails outwardly from said mid-element,” and claim 30 is allowable for at least this reason.

Moreover, claim 30 also recites a step to “to fit said outer rails between surfaces on a positioning device.” The Office Action simply asserts that Albert teaches this limitation without pointing the Applicants toward any specific portion of Albert for support. Albert fails to teach or suggest this limitation, because elements 7 and 8 of Albert, which the Office Action compares to “outer rails,” only provide support to a circuit board and do not function as recited in the claim limitation. This is an additional reason why claim 30 distinguishes over Albert.

Albert also fails to teach or suggest “placing said outer rails in abutting engagement with said surfaces on said positioning device by releasing said outer rails when said outer rails are between said surfaces.” The Office Action only alleges that Albert teaches this limitation, but fails to provide any explanation for its position. Elements 7 and 8 in Albert are not placed in “abutting engagement with ... surfaces on [a] positioning device.” For this additional reason, claim 30 is allowable over Albert.

The Office Action asserts that “[a]lternatively, [Albert discloses] a pair of outer rails (5, 6) and a mid element (14, 15) between the pair of outer rails, and at least one component for biasing each one of the outer rails outwardly from the middle-element (as shown in Fig. 4).” This “alternative” reading of Albert provides no support to the Office Action’s position because there is no component for biasing associated with Albert’s elements 5, 6, which the Office Action compares with the claimed outer rails. Applicants note that the Office Action did not point to an element in Albert that corresponds to the claimed “component for biasing.” There is none, and this is another reason why claim 30 is allowable over Albert.

In light the above reasons, claim 30 clearly distinguishes over Albert. Claims 32 and 35 depend from claim 30 and contain every limitation of claim 30. Claims 32 and 35 are allowable based at least on the reasons for allowance of claim 30, and also because the unique combinations recited by the dependent claims are neither taught nor suggested by Albert.

Applicants note with appreciation the indication that claims 33 and 34 are allowable. However, in view of the above remarks, Applicants believe the pending application is in condition for allowance.

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